

### Amendments to the Claims

1. (Currently Amended) A method to screen for nucleic acid molecules which show altered expression in an isolated first cell sample comprising:

comparing ~~the~~ gene expression profiles between said first cell sample with a second reference cell sample wherein said first cell sample has been grown in the presence of the carbon source butyrate, or a related carbon source from which butyrate is derived, either directly or indirectly, and

comparing ~~said~~ the expression profile in the first cell sample with the expression profile in said second reference cell sample which has not been grown in the presence of butyrate, or said related carbon source.

2. (Currently Amended) ~~[[A]]~~ The method according to ~~Claim~~ claim 1 wherein said screen for nucleic acid molecules comprises ~~the steps of~~:

- i) providing
  - a) a cell growth preparation comprising a first cell sample derived from at least one region of the colon; cell growth media; and a carbon source wherein said carbon source is butyrate; and
  - b) a cell growth preparation comprising a second cell sample derived from an equivalent region of the colon; cell growth media; and a carbon source which is not butyrate;
- ii) extracting nucleic acid from said first and second cell samples; and
- iii) comparing the gene expression profile in said first cell sample with the gene expression profile in said second cell sample.

3. (Currently Amended) ~~[[A]]~~ The method according to ~~Claim~~ claim 1 ~~or 2~~ wherein said first and second cell samples are derived from the ascending colon, transverse colon, descending colon, sigmoid region of the colon, or rectal region of the colon.

4. – 7. (Canceled)

8. (Currently Amended) [[A]] The method according to any of Claims claim 1 [[-7]]  
wherein said first and second cell samples comprise epithelial cells.

9. (Currently Amended) [[A]] The method according to any of Claims claim 1 [[-8]]  
wherein said carbon source which is not butyrate is glucose.

10. (Currently Amended) [[A]] The method according to any of Claims claim 1 [[-9]]  
wherein said nucleic acid molecule which shows altered expression is selected from the group as  
represented by the nucleic acid sequences shown in Table 1, or nucleic acid molecules which  
hybridise to the sequences presented Table 1.

11. (Original) A method for the detection of at least one nucleic acid molecule associated  
with the initiation and/or progression of colorectal cancer, in an animal, comprising the steps of:

- i) providing a biological sample comprising at least one cell to be tested;
- ii) contacting said sample with a ligand which binds at least one nucleic acid  
molecule as represented by the nucleic acid sequence selected from the  
group consisting of:
  - a) a nucleic acid molecule as represented by the nucleic acid  
sequence as shown in Table 1;
  - b) a nucleic acid molecule which hybridises to nucleic acid molecules  
as defined in (a);
  - c) a nucleic acid molecule that is degenerate as a consequence of the  
genetic code to the nucleic acid molecule represented in (a) and  
(b);
- iii) detecting the presence of at least one nucleic acid molecule in said sample.

12. (Currently Amended) [[A]] The method according to Claim claim 11 wherein said  
colorectal cancer is adenocarcinoma.

13. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 11 ~~or 12~~ wherein said ligand is a nucleic acid molecule adapted to anneal to said nucleic acid molecule which is indicative of colorectal cancer.

14. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 13 wherein said method is a polymerase chain reaction method.

15. (Original) A method for the detection of at least one polypeptide associated with the initiation and/or progression of colorectal cancer, in an animal, comprising the steps of:

- i) providing a biological sample comprising at least one cell to be tested;
- ii) contacting said sample with at least one ligand which ligand specifically binds at least one polypeptide encoded by a nucleic acid molecule as represented by the nucleic acid sequence shown in Table 1, or a variant polypeptide comprising an amino acid sequence which varies by the addition, deletion or substitution of at least one amino acid residue; and
- iii) detecting the presence of at least one polypeptide in said sample.

16. (Currently Amended) [[A]] The method ~~according to any of Claims~~ claim 11 ~~[-15]~~ wherein said animal is human.

17. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 15 ~~or 16~~ wherein said ligand is an antibody.

18. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 17 wherein said antibody is a monoclonal antibody, or ~~at least the an~~ effective binding part thereof.

19. (Canceled)

20. (Original) A method to screen for agents which modulate the activity of at least one gene associated with the initiation and/or progression of colorectal cancer comprising the steps of:

- i) forming a preparation comprising at least one polypeptide wherein said polypeptide is encoded by a nucleic acid molecule as represented by the nucleic acid sequence as shown in Table 1, or a variant polypeptide comprising an amino acid sequence which varies by the addition, deletion or substitution of at least one amino acid residue as represented by the amino acid sequences shown in Table 1, and at least one agent to be tested; and
- ii) determining the activity of said agent with respect to activity of said polypeptide.

21. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 20 wherein said polypeptide is expressed by a cell wherein said cell is transformed or transfected with said nucleic acid molecule.

22. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 21 wherein said nucleic acid molecule is part of a vector adapted for recombinant expression of said nucleic acid molecule.

23. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 22 wherein said vector comprises ~~is provided with~~ a promoter which enables the expression of said nucleic acid molecule to be regulated.

24. (Currently Amended) [[A]] The method ~~according to any of Claims~~ claim 21~~[[23]]~~ wherein said cell is derived from the colon.

25. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 24 wherein said cell is an epithelial cell.

26. (Currently Amended) [[A]] The method ~~according to any of Claims~~ claim 20~~[[25]]~~ wherein said agent is an antibody.

27. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 26 wherein said antibody is a monoclonal antibody or modified monoclonal antibody, or at least the effective binding part thereof.
28. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 27 wherein said effective binding part ~~fragment~~ is a Fab fragment.
29. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 28 wherein said antibody is selected from the group consisting of: F(ab')<sub>2</sub>, Fab, Fv and Fd fragments; and antibodies comprising CDR3 regions.
30. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 26 wherein said antibody is a humanized antibody.
31. (Currently Amended) [[A]] The method according to ~~Claim~~ claim 26 wherein said antibody is a chimeric antibody.
32. (Currently Amended) [[A]] The method ~~according to any of Claims~~ claim 20[[-25]] wherein said agent is a polypeptide, peptide, or nucleic acid molecule.
33. – 34. (Canceled)
35. (Currently Amended) [[A]] The method according to ~~Claim~~ claim [[34]]32 wherein said nucleic acid molecule is an aptamer, an inhibitory RNA molecule, or an antisense nucleic acid molecule.
36. (Canceled)

37. (Currently Amended) ~~[[A]]~~ The method according to ~~Claim claim~~ 36 wherein said inhibitory RNA is encoded by a transcription cassette comprising a nucleic acid molecule, or part thereof, wherein said molecule is selected from the group consisting of:

- i) a nucleic acid molecule represented by the nucleic acid sequence shown in Table 1 ;
- ii) a nucleic acid molecule which hybridises to the sequence in (i) above and which encodes a polypeptide which initiates or promotes transformation of colon cells; or
- iii) a nucleic acid molecule which is degenerate because of the genetic code to the sequences defined in (i) and (ii) above, wherein said cassette is adapted such that both sense and antisense nucleic acid molecules are transcribed from said cassette.

38. (Currently Amended) ~~[[A]]~~ The method according to ~~Claim claim~~ 37 wherein said cassette is provided with at least two promoters adapted to transcribe both sense and antisense strands of said nucleic acid molecule.

39. (Currently Amended) ~~[[A]]~~ The method according to ~~Claim claim~~ 37 wherein said cassette comprises a nucleic acid molecule wherein said molecule comprises a first part linked to a second part wherein said first and second parts are complementary over at least ~~part a portion~~ of their sequence and further wherein transcription of said nucleic acid molecule produces an RNA molecule which forms a double stranded region by complementary base pairing of said first and second parts.

40. (Canceled)

41. (Currently Amended) A pharmaceutical composition comprising an~~An~~ antibody or effective binding part thereof, identified by the method ~~according to any of Claims claim~~ 26~~[-31~~ for use as a pharmaceutical~~]]~~.

42. (Currently Amended) A pharmaceutical composition comprising a [[A]] polypeptide identified by the method according to Claim ~~claim~~ 32 for use as a pharmaceutical.

43. (Canceled)

44. (Currently Amended) A pharmaceutical composition comprising a [[A]] nucleic acid molecule identified by the method according to Claim ~~claim~~ 3234 for use as a pharmaceutical.

45. (Currently Amended) The pharmaceutical composition of Use according to Claim ~~claim~~ 44 wherein said nucleic acid molecule is an aptamer, inhibitor RNA, or an antisense nucleic acid molecule.

46. – 47. (Canceled)

48. (Currently Amended) The pharmaceutical composition of Use according to any of Claims ~~claim~~ 41[[-47]] wherein said pharmaceutical composition further comprises a [[a]] diluent, carrier or excipient.